

CLAIMS

What is claimed is:

5 1. A method for coloring hair to provide more vibrant, natural and long-lasting color comprising carrying out the following sequential steps:

a) contacting the hair with a dye precursor mixture comprising:

10 i) a primary intermediate having a pKa in the range from about 3 to about 10,

ii) optionally a coupler having a pKa in the range from about 3 to about 10

15 wherein the pH of the precursor mixture is selected such that less than 50% of the molecules comprising the primary intermediate and the coupler are in their anionic form when they first contact the hair,

b) applying a means for aligning the hair and distributing the dye precursor mixture over the hair, and

20 c) contacting the hair with a developer mixture capable of inducing oxidation of primary intermediate and coupler in the precursor mixture that is in contact with the hair to form colored species,

25 wherein the dye precursor mixture remains in contact with the hair for a time period of from about 0.5 to 60 minutes before the hair is contacted with the developer and wherein the primary intermediate and coupler remain substantially inactive during this time period.

30 2. The method according to claim 1 wherein the primary intermediate is selected from the group consisting of the neutral or salt forms of para-phenylenediamine,

derivatized para-phenylenediamines, para-aminophenol, substituted para-aminophenols, 4,5 – diaminopyrazole, substituted 4,5 – diaminopyrazole, polyamino-pyrimidine, hydroxy-polyaminopyrimidine and other substituted polyaminopyrimidines and mixtures thereof.

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3. The method according to claim 1 wherein the dye precursor mixture produces a color change, ΔE , of at least about 0.15 units when measured by the In-Vitro Piedmont Color Retention Test.

10 4. The method according to claim 1 wherein the primary intermediate and the coupler is each present at a level of from about 0.1 Wt% to about 10 Wt% based on the total weight of the dye precursor mixture and the weight ratio of the primary intermediate to the coupler is in the range of from about 100 to about 0.01.

15 5. The method according to claim 1 wherein the dye precursor solution contains a nascent oxidizing compound.

6. The method according to claim 1 wherein the dye precursor mixture has a pH selected such that at least 50% of the molecules comprising the primary
20 intermediate and optional coupler are in their nonionic forms when contacting the hair in step a.

7. The method according to claim 1 wherein the aligning and distributing means is applied to the hair after the hair is contacted with the dye precursor mixture but
25 before the hair is contacted with the developer mixture.

8. The method according to claim 1 wherein the aligning and distributing means incorporates at least one comb element or at least one brush element or a combination thereof.

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9. The method according to claim 1 wherein the aligning and distributing means is selected from the group consisting of a comb, a brush, a pick, an elongated element coupled in an open/close relationship, a towelette, a cloth, a sponge and a combination of these implements.

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10. The method according to claim 1 wherein the aligning and distributing means additionally comprises an absorbent element capable of removing excess dye precursor from the hair.

10 11. The method according to claim 1 wherein the developer comprises an oxidizing agent selected from the group consisting of hydrogen peroxide, urea peroxide, melamine peroxide, sodium perborate, sodium percarbonate and mixtures thereof.

12. The method according to claim 1 wherein the developer mixture comprises an
15 alkaline pH control agent capable of activating nascent oxidizing agents when present in the precursor mixture to induce oxidation of primary intermediate and coupler in the precursor mixture that is in contact with the hair to form colored species.

20 13. A kit for coloring hair which comprises:

a) a dye precursor mixture comprising:

i) a primary intermediate having a pKa in the range from about 3 to about
10,

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ii) optionally a coupler having a pKa in the range from about 3 to about 10

wherein the pH of the precursor solution is selected such less than 50% of the
molecules comprising the primary intermediate and the coupler are in their anionic form
30 when they first contact the hair,

b) a means for aligning the hair fibers and distributing the dye precursor uniformly over the hair, and

5 c) a developer mixture capable of inducing oxidation of the primary intermediate and coupler to form colored species.

14. The kit according to claim 13 wherein the primary intermediate is selected from the group consisting of para phenylene diamine, derivatized para phenylene diamines,
10 para aminophenol, substituted para aminophenols, 4,5 – diaminopyrazole, substituted 4,5 – diaminopyrazole, polyamino-pyrimidine, hydroxy polyaminopyrimidine and other substituted polyaminopyrimidines and mixtures thereof

15 15. The kit according to claim 13 wherein the aligning and distributing means contains at least one comb element or at least one brush element.

16. The kit according to claim 13 wherein the aligning and distributing means additionally comprises an absorbent element capable of removing excess dye
20 precursor from the hair.

17. The kit according to claim 13 wherein the aligning and distributing means is selected from the group consisting a comb, a brush, a pick, an elongated element coupled in an open/close relationship, towelette, a cloth, a sponge and a combination of these
25 implements.

18. The kit according to claim 13 further comprising written instructions that direct the user to first apply the dye precursor mixture to the hair, align the hair and distribute the dye uniformly by utilizing the means provided therein and then to apply the

developer solution to the hair after 30 seconds to about 60 minutes from the time the dye precursor solution was applied.

19. The kit according to claim 13 further comprising conditioning agents, color sealant,
5 damage control agents, hair benefit agents, perfumes, moisturizers and mixtures thereof.